

### **Listing of the Claims**

1. (Currently amended)      A method of ~~managing the use of healthcare services~~  
improving health and reducing healthcare encounter trends, comprising the steps of:

collecting self-reported information from an individual about their perceived health,  
wherein said self-reported information comprises said individual's response to each distinct  
predictive factor of ~~for~~ a predetermined set of predictive factors;

assigning, based upon said ~~information from said individual~~ individual's response, a  
~~separate~~ dichotomous value to each said distinct predictive factor of said predetermined set of  
predictive factors;

generating, based upon a predetermined predictive model and said ~~separate~~ dichotomous  
values assigned to said predetermined set of predictive factors, a ~~risk level~~ probability value of  
said individual becoming a ~~member of the highest utilizing group using high-encounter user of~~  
healthcare services ~~at a predetermined level for any reason within a prospective time span,~~  
wherein a high-encounter user makes high use of inpatient, outpatient, emergency room, or  
physician office healthcare services; and

identifying said individual as a probable high-encounter user of healthcare services  
within said prospective time span if said probability value of said individual exceeds a  
predetermined threshold

~~wherein said assigning step comprises the following steps for each said distinct predictive~~  
~~factor of said predetermined set of predictive factors:~~

~~determining, based upon said information, whether said distinct predictive factor is~~  
~~indicative of a high risk of said individual becoming a member of the highest utilizing group~~

~~using said healthcare services at said predetermined level for any reason within said prospective time span;~~

~~assigning, based upon said information, a first dichotomous value to said separate value for said distinct predictive factor if said determining step determines that said distinct predictive factor is indicative of said high risk of said individual becoming a member of the highest utilizing group using said healthcare services at said predetermined level for any reason within said prospective time span; and~~

~~assigning, based upon said information, a second dichotomous value to said separate value for said distinct predictive factor if said determining step determines that said distinct predictive factor is not indicative of said high risk of said individual becoming a member of the highest utilizing group using said healthcare services at said predetermined level for any reason within said prospective time span.~~

2. (Original) The method of claim 1, wherein said collecting step comprises the step of:  
presenting said individual with a self assessment questionnaire designed to elicit said information from said individual for said predetermined set of predictive factors.

3. (Currently amended) The method of claim 1, wherein said collecting step comprises the step of:

presenting said individual with a questionnaire designed to elicit said ~~information from said individual for~~ individual's response to each said distinct predictive factor of said predetermined set of predictive factors, said predetermined set of predictive factors including ~~past healthcare use factors, demographic factors, perceived health factors, disease factors,~~

~~healthcare compliance factors, healthcare belief factors, and healthcare preference factors~~  
domains of functional ability, adherence with current medical treatment, numbers of uses of  
various healthcare services over past time periods, beliefs in the safety and value of healthcare  
services, healthcare partnering preferences and information-seeking preferences.

4. (Original) The method of claim 1, wherein said collecting step comprises the step of:  
presenting, to a web browser, a questionnaire that elicits said information from said  
individual for said predetermined set of predictive factors;  
receiving, via said web browser, said information for said predetermined set of predictive  
factors in response to said presenting step.

5-7. (Cancelled).

8. (Currently amended) The method of claim ~~10~~ 1, further comprising the steps of:  
determining, based upon said information from said individual, at least one intervention  
program for said individual in response to said probability value exceeding said predetermined  
threshold.

9. (Currently amended) The method of claim 1, wherein said generating step  
comprises ~~the step of:~~  
~~generating, based upon using said separate dichotomous values assigned to said set of~~  
predictive factors and a logistic regression formula of said predictive model, said ~~risk level~~  
probability value of said individual becoming a ~~member of the highest utilizing group using said~~

high-encounter user of healthcare services at said predetermined level for any reason within said prospective time span.

10-21. (Cancelled).

22. (Currently amended) The method of claim 1, ~~further comprising the step of~~  
wherein said generating step comprises:

defining a first reference date in the future; and

~~wherein the generating step includes generating, using said separate dichotomous values~~  
assigned to each said distinct predictive factor of said predetermined set of predictive factors, a  
risk level probability value of said individual becoming a ~~member of the highest utilizing group~~  
using said high-encounter user of healthcare services at a predetermined level for any reason in  
the time period between a present date and ~~the said~~ first reference date.

23-43. Canceled

44. (New) The method of claim 1, further comprising:

presenting said individual with a self-assessment questionnaire designed to elicit said  
individual's response to each said distinct predictive factor of said predetermined set of  
predictive factors, said self-assessment questionnaire including a plurality of questions;

collecting a plurality of answers to said self-assessment questionnaire from each of a  
plurality of sample subjects;

collecting a total number of healthcare encounters within a predetermined time span for

each of said plurality of sample subjects, an encounter being a use of inpatient, outpatient, emergency room, or physician office healthcare services by said sample subject;

determining a dependent variable during derivation of said predetermined predictive model, said dependent variable being based on said total number of healthcare encounters within a predetermined time span for each of said plurality of sample subjects;

determining, based on said plurality of answers from each of said plurality of sample subjects, said predetermined set of predictive factors from a larger set of potential predictive factors during derivation of a logistic regression formula for said predictive model; and

deriving said logistic regression formula for said predictive model from said dependent variable and said predetermined set of predictive factors, said predictive model being designed to predict said probability value of a person becoming a high-encounter user of healthcare services for any reason within a prospective time span.

45. (New) The method of claim 44, wherein said total number of healthcare encounters for each particular subject of said plurality of sample subjects is equal to a total of the times said particular subject used a unique healthcare service provider on a unique date within said predetermined time span.

46. (New) A method of improving health and reducing healthcare encounter trends, the method comprising:

designing a self-assessment questionnaire comprising a plurality of questions designed to elicit self-reported information from an individual about their perceived health;

presenting each of a plurality of sample subjects with the self-assessment questionnaire;

collecting a plurality of answers from each of the plurality of sample subjects answering the plurality of questions of the self-assessment questionnaire;

collecting from healthcare claims data, a total number of healthcare encounters for each of the plurality of sample subjects during a predetermined time span, the total number of healthcare encounters being the sum of all uses of inpatient, outpatient, emergency room, or physician office healthcare services by the sample subject within the predetermined time span;

determining a dependent variable based on the total number of healthcare encounters for each of the plurality of sample subjects during the predetermined time span;

determining a set of independent predictor variables based upon the plurality of answers from the self-assessment questionnaire from each of the plurality of sample subjects;

associating each predictor variable of the set of independent predictor variables to at least one of the plurality of questions of the self-assessment questionnaire;

deriving a predictive modeling formula from the dependent variable and the set of independent predictor variables for each of the plurality of sample subjects, the predictive modeling formula being designed to determine a probability value for each individual of a plurality of individuals becoming a high-encounter user of healthcare services for any reason within a prospective time span;

determining a threshold value such that the individual will be classified as a probable high-encounter user of healthcare services within the prospective time span if the probability value computed by the predictive modeling formula for the individual exceeds the threshold value; and

preparing the predictive modeling formula and the threshold value for the purpose of improving health and reducing healthcare encounter trends.

47. (New) The method of claim 46, further comprising:

presenting a person with the self-assessment questionnaire to elicit self reported information from the person;

collecting a plurality of answers from the person answering the plurality of questions of the self-assessment questionnaire;

determining, based upon the plurality of answers, a dichotomous value for each predictor variable of the set of independent predictor variables;

assigning a first dichotomous value to each predictor variable for which the determining step determines that the self-reported information is indicative of the person being a high-encounter user of healthcare services within the prospective time span;

assigning a second dichotomous value to each predictor variable for which the determining step determines that the self reported information is not indicative of the person being a high-encounter user of healthcare services within the prospective time span;

generating, based upon the predictive modeling formula and the dichotomous values assigned to each of the predictor variables in the set of predictor variables, a probability value of the person being a high-encounter user of healthcare services within the prospective time span

comparing the probability value to the threshold value; and

identifying the person as a probable high-encounter user of healthcare services within the prospective time span if the probability value exceeds the threshold value.

48. (New) The method of claim 47, further comprising:

assigning the first dichotomous value to each predictor variable for which the at least one

of the plurality of questions associated with the predictor variable is unanswered or answered inappropriately.

49. (New) The method of claim 47, further comprising:

identifying the person as a probable high-encounter-user of healthcare services if the person fails to answer more than a predetermined number of the plurality of questions of the self-assessment questionnaire.

50. (New) The method of claim 47, wherein the collecting a plurality of answers step comprises:

presenting the self-assessment questionnaire to the person through a web browser; and  
receiving the plurality of answers from the person in response to the presenting step through the web browser.

51. (New) The method of claim 47, wherein the collecting a plurality of answers step comprises:

presenting the self-assessment questionnaire to the person, the self-assessment questionnaire including a scannable form; and  
scanning the scannable form received in response to the presenting step to retrieve the plurality of answers from the person.

52. (New) The method of claim 47, wherein the collecting a plurality of answers step comprises:



presenting the self-assessment questionnaire to the person using an interactive voice response telephone system; and

receiving the plurality of answers from the person using the interactive voice response telephone system.

53. (New) The method of claim 47, wherein the plurality of questions of the self-assessment questionnaire includes questions directed to the domains of functional ability, adherence with past medical advice, number of encounters with various healthcare services over a certain period, beliefs in the safety and value of healthcare services and healthcare partnering and information seeking preferences.

54. (New) The method of claim 53, wherein the questions directed to functional ability include questions directed to physical ability, mental ability, social ability, spiritual ability and personal needs ability in which the person is asked to rate their degree of functioning related to their normal ability in each such domain of functional ability.

55. (New) The method of claim 47, wherein the predictive modeling function is derived using logistic regression.

56. (New) The method of claim 55, wherein the predictive modeling function includes a formula represented by:

$$z = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 \dots \beta_N X_N + \beta_{N+1} X_1 X_2 + C,$$

$$P_{\text{high\_use}} = e^z / (1 + e^z)$$

wherein  $\beta_1, \beta_2, \beta_3, \beta_4 \dots \beta_{N+1}$  represent regression coefficients,  
 $X_1, X_2, X_3, X_4 \dots X_N$  represent the set of predictor variables, and  
 $P_{\text{high\_use}}$  represents the probability value of the person becoming a high-encounter user of  
healthcare services for any reason within the prospective time span.